

Venktesh R. Ramnath, M.D.

Clinical and Administrative Experience

UC San Diego Health, San Diego, CA, USA.

- **Medical Director, Select Medical Hospital, San Diego** **12/19 - present**
 - Clinical, operational, administrative direction of long-term acute care hospital
- **Medical Director, Critical Care and Telemedicine Outreach** **11/16 – present**
 - Strategic design, launch, and operational management of hybrid telemedicine/in-person critical care services to growing UCSD hospital network (<https://vimeo.com/233518324/d0432d9f12>).
 - Awarded *Physician of the Quarter*, Southwest Healthcare System, Jan 2018
 - Oversight of clinical and administrative needs of 20+ physicians, physician extenders, and local directors
 - Achieved 75% cost reduction in operations and accolades for team-based quality in 1 year
- **Researcher in early predictive strategies and interventions in pulmonary and critical care medicine (e.g. sepsis, shock, ventilator waveforms, etc.) using machine learning and deep learning methodologies**
 - Multidisciplinary, industry-academic partnership to improve outcomes in COPD using machine learning algorithms to strategize use of multi-modality treatment interventions including telehealth
 - National Science Foundation proposal submission in progress, in conjunction with support from Google and Resmed, Inc.
 - Cross-collaboration with Bioengineering and Bioinformatics departments for application of novel bacterial genomic signature technology and machine learning algorithms to improve outcomes for adult patients with shock and sepsis
 - ROI planning in progress for studying integrated platform efficacy in early sepsis detection in adult ED patients at UCSD, early predictive algorithm for clinical shock in hospitalized trauma, postoperative, and sepsis patients
 - Co-principal investigator in BARDA grant on multi-center study on sepsis data harmonization and predictive analytics
 - “Analytics Translator” and Clinical Lead for UCSD Telehealth Expansion Initiative in Ambulatory Operations as industry-academic collaboration using Artificial Intelligence (machine learning-based tools) for candidate selection, enrollment, automated care delivery and sensor integration
 - Other ongoing research topics:
 - Machine learning-based predictive analytics for delirium and acute respiratory failure (ventilator-based breath-to-breath variability analysis)
 - Human-centered approaches to support families of ICU patients
 - Use of augmented/virtual/mixed reality in critical care settings to address clinical workflows, delirium and post-ICU-related post-traumatic stress disorder management.
- **Staff Intensivist and Pulmonologist at multiple hospitals**
 - UC San Diego Health hospitals (Jacobs and Hillcrest campuses), Southwest Healthcare System (Inland Valley Medical Center, Rancho Springs Medical Center)
- **Associate Clinical Professor**, University of California at San Diego (UCSD)
- **Innovation Champion and Operations Manager** for mHealth and IT technologies for Division of Pulmonary, Critical Care, and Sleep Medicine
 - Creation and successful launch of pilot in remote access-based home sleep test evaluations using cloud technologies and telemedicine support
 - Development of EMR (Epic and Cerner) enhancements of IT workflows in ICU, with focus on interoperability and sensor data integration
 - Evaluation and testing of medical device integration (MDI) platforms as part of overall Tele-ICU strategy
 - Optimization of mobile coding/billing platform (Ingenious Med) UI/UX for UCSD for professional fee code capture and revenue cycle optimization
 - Curriculum design and operational management of in-person Visiting Professor Rounds series at UCSD affiliate hospitals
 - Operational assistance of educational seminar (e.g. Grand Rounds) mobile live-stream broadcasts and mobile scheduling platform (QGenda) for affiliate hospital staff and providers

Central Texas Medical Center, San Marcos, TX, USA.

05/16 – 05/2017

- Staff Intensivist and Pulmonologist in Live Oak Health Partners group practice

Resolute Health Hospital, New Braunfels, TX, USA.

07/14 – 04/2016

- Staff Intensivist and Pulmonologist
- **Medical Director**, Intensive Care Unit
 - Directed launch of new 16-bed ICU with evidence-based practice guidelines and lean processes.
 - Created evidence-based clinical guidelines and directed educational rollout over entire 80-hospital network for post-arrest temperature management initiative
 - Active member of Regional and National Tenet Critical Care Councils
- **Physician Champion in institution-wide health initiatives**
 - Leader of multidisciplinary teams to create effective platforms across specialties in quality improvement initiatives (e.g. sepsis, ICU admission/discharge guidelines, etc.), physician documentation, physician order sets, evidence-based content, and clinical IT workflows
- **Managing Director**, Innovation and Design Institute
 - Developed a mobile tablet-based interactive tool that engages and empowers hospitalized patients and family members to enhance the inpatient healthcare experience; design of ICU telemedicine service platform; creation of outreach program to high school students about healthcare career tracks

San Leandro Hospital, San Leandro, CA, USA.**08/12 – 06/2014**

- Staff Intensivist and Pulmonologist
- **Medical Director**, Intensive Care Unit and Respiratory Care Services

Offsite Care, Inc., Sebastopol, CA, USA. (Global telemedicine company in specialist clinical services)**10/11 – 06/2014**

- Staff Critical Care and Pulmonology Consultant, Hospitalist Physician and telemedicine consultant
- **Medical Director**, Critical Care Services, Oct 2011 – Sept 2012
- Interim Chief Operations Officer, May – Aug 2012
 - Directed oversight of all operations related to telemedicine services in over 10 medical specialties

St. Joseph Hospital, Eureka, CA, USA.**05/10 – 04/2012**

- Staff Intensivist and Pulmonologist
- **Medical Director**, Intensive Care Unit and Respiratory Care

Comphealth, Inc., Salt Lake City, UT, USA.**06/10 – 06/2016**

- Staff Pulmonologist and Intensivist, national Locum Tenens clinical services

Delphi Health Care Partners, Inc., Morrisville, NC, USA.**08/09 – 08/2010**

- Staff Intensivist and Pulmonologist at Regional Medical Center of San Jose (San Jose, CA) and Twin Cities Community Hospital (Templeton, CA)

Cambridge Health Alliance; Pulmonary Associates of Greater Boston, Cambridge, MA, USA.**07/07 – 08/2009**

- Staff Intensivist, Pulmonologist, and Hospitalist Physician
- **Medical Director**, Intensive Care Unit, The Cambridge Hospital
- **Instructor in Medicine**, Harvard Medical School

*Professional Development and Post-Doctoral Training***Stanford University Medical Center Physician Entrepreneurial Fellowship, Stanford, CA, USA.****12/13 – 12/2014**

- **Consulting Assistant Professor**, Department of Anesthesia, Perioperative & Pain Medicine, Stanford University Medical Center
- Core team member, Medicine X Spark (<http://medicinex.stanford.edu/spark/>) program that addresses healthcare product development in various industry-academic co-development initiatives
- Co-founder, Digital Health Startup Clinic
- Organizer and participant in Stanford Medicine X (patient-centered health tech conference) and *MedicineXLive* weekly panels

Stanford Ignite Program, Stanford University Graduate School of Business, Stanford, CA, USA.**2014**

- Professional advanced certificate program in business administration. Training includes core and applied business skills e.g. operations, strategy, accounting, finance, economics, negotiation, teamwork, public speaking, leadership, entrepreneurship, commercialization, marketing, and other business-related subjects.

Harvard Medical School Training Program in Pulmonary and Critical Care Medicine, Boston, MA, USA.**07/04 – 06/2007**

- Clinical and Research Fellow, Department of Pulmonary and Critical Care Medicine

- Hospital affiliations: Mass. General Hospital, Brigham & Women's Hospital, Beth Israel Deaconess Medical Center

New York Downtown Hospital (formerly NYU Downtown Hospital), New York, NY, USA. 07/03 – 06/2004

- **Chief Medical Resident**, Department of Medicine

New York-Presbyterian Hospital, Weill-Cornell University Medical Center, New York, NY, USA. 06/00 – 06/2003

- Intern and Resident, Department of Internal Medicine

International Health Experience

Salurveda Pulmonary Intensive Care Associates, Inc., Berkeley, CA, USA. 08/09 - present

- **President and Founder**
 - International consultancy addressing clinical services, hospital infrastructure and development, and medical education in global medical contexts. Medical expert witness experience. Website: www.GlobalICUconsultants.com.
- **Technical Advisor in Intensive Care**, Abbott Fund, Muhimbili National Hospital, Dar Es Salaam, Tanzania. 08/10 – 10/2010
 - Critical care (ICU) technical advisor for clinical, academic, infrastructure development.

Visiting Professor, Universidad Europea de Madrid (European University of Madrid), Madrid, Spain. 03/12 – 06/2016

- Organization and conducting seminars in bioethics, critical care, pulmonology and their role in ICU patient management for faculty and medical students at the university.

Intensive Care and Pulmonology Consultant, Columbia Asia Health Care, Bangalore, India. 12/08 – 12/2010

- Pulmonary/critical care quality improvement consultant for Hebbal- and Yeshwantpura-CAHC sites

Clinical Coordinator and Quality Improvement Consultant, Project Hope Mission, Banda Aceh, Indonesia. 1/2006, 1/2007

- Lead physician of quality improvement consultant team for Pulmonary Ward and Intensive Care Unit as part of rebuilding efforts for tsunami-devastated Abidin Hospital, Banda Aceh, Indonesia.

Clinician and Researcher, Ghana Health Mission, Sekondi-Takoradi, Ghana. 03/2003

- One of 4 physicians leading a group of 25 nurses/students/paramedical personnel deliver free primary health care to ~900 patients in underserved area of rural western Africa and corresponding data analysis.

Education and Research Fellowships

Mayo Medical School (now Mayo Clinic College of Medicine), Rochester, MN. 08/95 – 05/2000

- M.D. degree. Mayo Merit Scholarship, 1995-2000. Class President, 1995-1997.

Rotary Foundation Academic-Year Ambassadorial Scholar, Bangalore, India. 07/94 – 05/1995

- Extensive study of Sanskrit, Indian philosophy, language, and culture. Ambassador of international goodwill.

Harvard College, Cambridge, MA. 1990 – 1994

- B.A. *cum laude* in Biochemical Sciences. Harvard College Scholarship 1992. Dean's List 1990-1994.

Howard Hughes Medical Institute – National Institutes of Health Research Scholar, Bethesda, MD. 1997 – 1998

- Researcher in Genetics and Molecular Biology Branch, National Human Genome Research Institute (NHGRI). Characterization of a mouse model of a human immune genetic disorder (ALPS) under direction of Dr. Jennifer M. Puck.

Academic Appointments

- Associate Clinical Professor, Division of Pulmonary, Critical Care, and Sleep Medicine, University of California at San Diego, La Jolla, CA, 2017 – present
- Consulting Assistant Professor, Department of Anesthesiology, Perioperative and Pain Medicine, Stanford University Medical Center, Stanford, CA., 2013 – 2014
- Visiting Professor and External Advisor for doctoral candidates in Biomedicine and Health Sciences, Universidad Europea de Madrid (European University of Madrid), Madrid, Spain, 2012 – 2017.
- Instructor in Medicine, Harvard Medical School, July 2007 – Aug 2009
- Manuscript reviewer, Journal of Telemedicine and Telecare, Sage Publications, April 2015 – present

Professional Appointments, Committees, and Memberships

- Utilization Review Committee, UCSD, 2019 – present
- Advisory Board member, Chronos Health, 2018 – present
- Member, American Thoracic Society, 2015 – present
- Executive Board Member, Sow Healthy Coalition, Inc., 2015 – present
- Physician Panel, Doximity, Inc., 2013 – present
- Rockhealth Physician Angel Investor Group, 2013 – present
- Physician Advisory Board, DocOnDemand, 2013 – present
- Member, American College of Chest Physicians, 2005 – present
- Member, Society of Critical Care Medicine, 2005 – present. Membership Committee member, 2013 – present
- Member, Associate of the American College of Physicians – American Society of Internal Medicine, 2002 – present
- ICU SIG, American Telemedicine Association 2017 - present
- Critical Care Workgroup, American Telemedicine Association, 2012 – present
- mHealth Workgroup, American Telemedicine Association, 2012 – present

Awards and Distinctions

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| • Physician of the Quarter, Southwest Healthcare System | Jan 2018 |
| • Harvard Medical School Award for Excellence of Teaching | April 2006 |
| • Tutor, Harvard Medical School, Course on Respiratory and Cardiovascular Pathophysiology | 2006 – 2007 |

Publications and presentations

1. **Ramnath V**, Wardi G, Malhotra A. Age remains a significant risk factor in sepsis. (*Manuscript submission in progress*)
2. **Ramnath V**. Síndrome de Distress Respiratoria Aguda (Acute Respiratory Distress Syndrome). Platform presentation (in Spanish) at Congreso Internacional de Manejo del Paciente Crítico in Morelia, Michoacán, México, October 26, 2019.
3. Josef C, **Ramnath V**, Malhotra A, Nemati S. Performance Comparison of Unit-Specific and Generalizable Sepsis Prediction Models Across Intensive Care Units. Poster presented at Shock Society 2019 Annual Meeting, Coronado, CA, June 10, 2019.
4. Johnson J, Schmitz E. **Ramnath V**, Weibel N. Designing Family-Centered Aids for the Intensive Care Unit. Abstract presented at CHI 2019, Glasgow, Scotland, UK, May 4-9, 2019.
5. Johnson J, Schmitz E, **Ramnath V**, Weibel N. A Human-Centered Approach to Understanding and Supporting ICU Families. (*manuscript submission in progress*).
6. **Ramnath VR** and Malhotra A (2019). Remote Proactive Physiologic Monitoring in the ICU. In M. Koenig (Ed.), *Telemedicine in the ICU* (pp. 21-44). Springer Nature Switzerland.
7. **Ramnath VR**, Ho L, Maggio L, Khazeni N. “Centralized Monitoring and Virtual Consultant Models of Tele-ICU care: A Systematic Review.” *Telemedicine and e-Health* 2014;20(10):936-61.
8. **Ramnath VR**, Khazeni N. “Centralized Monitoring and Virtual Consultant Models of Tele-ICU care: A Side-By-Side Review.” *Telemedicine and e-Health* 2014;20(10):962-71.
9. Herreros B, **Ramnath VR**, Bishop L, et al. “Clinical Ethics Protocols in the Clinical Ethics Committees of Madrid.” *J Med Ethics* 2013;0:1-4.
10. **Ramnath VR**, Hess DR, Thompson BT. “Conventional Mechanical Ventilation in Acute Lung Injury and Acute Respiratory Distress Syndrome.” *Clinics in Chest Medicine* 2006;24(4): 601-613.
11. **Ramnath VR**, Clark S, Camargo CA Jr. “Multicenter Study of Clinical Features of Sudden-Onset Versus Slower-Onset Asthma Exacerbations Requiring Hospitalization.” *Respiratory Care* 2007;52(8):1013-20.
12. **Ramnath VR**, Osgood RA. “A 36-year-old woman with cough, positive PPD skin test, and cavitary upper lobe consolidation.” *Chest* 2010;137(4):994-998.

13. Mohan AV, **Ramnath VR**, Patals E, Attar EC. "Non-specific interstitial pneumonia as the initial presentation of biphenotypic acute leukemia: a case report. Cases Journal 2009;2:8217.
14. Pardi, DS, **Ramnath VR**, Loftus EV, Sandborn WJ, Tremaine WJ. "Lymphocytic colitis: clinical features, treatment, and outcomes." American Journal of Gastroenterology 2002;97:2829-33.
15. Adluri S, Gilewski T, Zhang S, **Ramnath V**, Ragupathi G, Livingston P. "Specificity analysis of sera from breast cancer patients vaccinated with MUC1-KLH plus QS-21." British Journal of Cancer 1999;79(11/12):1806-1812.
16. Choi Y, **Ramnath V**, Puck JM. "Expression in transgenic mice of dominant interfering Fas mutations: a model for Autoimmune Lymphoproliferative Syndrome (ALPS)." Clinical Immunology 1999;93(1):34-45.
17. **Ramnath V**. "Evaluation of computerized tomography and magnetic resonance imaging for hepatic abscess visualization." April 1994 (Thesis for Harvard College, Cambridge, MA).
18. **Ramnath V**, Choi Y, Puck JM. "Expression in transgenic mice of dominant interfering Fas mutations: a model for Autoimmune Lymphoproliferative Syndrome (ALPS)." Platform presentation on February 9, 1999 at the Mayo Foundation Research Symposium, Mayo Clinic, Rochester, MN.
19. **Ramnath V**, Choi Y, Puck JM. "Characterization of a mouse model of ALPS." Poster presentation at the Howard Hughes Medical Institute-National Institutes of Health Research Symposium on May 19, 1998, Bethesda, MD.

Activities

- Violinist: multiple chamber music programs in the past (Austin Chamber Music Program, 92nd Y Chamber music, New England Conservatory Chamber Music program); Violin study and performance for 30+ years
- Interviewer, Harvard College (undergraduate) admissions, 2016-present.
- Tennis competition in local leagues and tournaments, 1981-2000. Harvard Intramural Tennis Champion 1993, 1994.
- Fluent in Spanish, French, and Sankethi (Indian). Hindi and Kannada (Indian) proficiency.